

Creating an accurate on-screen preview within a color-aware application like Adobe Photoshop is called soft proofing.

Soft proofing is such an important component in the imaging process that it will take more than one column to cover it.

The goal of color management is to produce images in the elusive ideal state known as WYSIWYG (what you see is what you get). With soft proofing, many of the concepts we've covered so far toward reaching that goal will come into play.

We'll start with a few important factors in producing valid soft proofs in Photoshop. First, having very accurate ICC profiles for both the display and the output device is key. One without the other can't possibly produce an accurate preview of an image within ICC-aware applications like Photoshop.

Next, understand that viewing a file in an RGB working space like Adobe RGB 1998 will not provide any useful information to Photoshop about how the image will output on any specific printer. Remember that by their very design, none of the Photoshop RGB working spaces is in any way related to any output device—so how could Photoshop possibly show us how a set of color values in Adobe RGB 1998 would look to an Epson Stylus Photo 2200 on luster paper, compared to that set of values to a Fujifilm Pictography 4500 on gloss paper, without first having an ICC profile for those devices? It can't. We need good, accurate ICC profiles for any output device we wish to base a soft proof on,

What is color management?

Part 9: Soft proofing explained

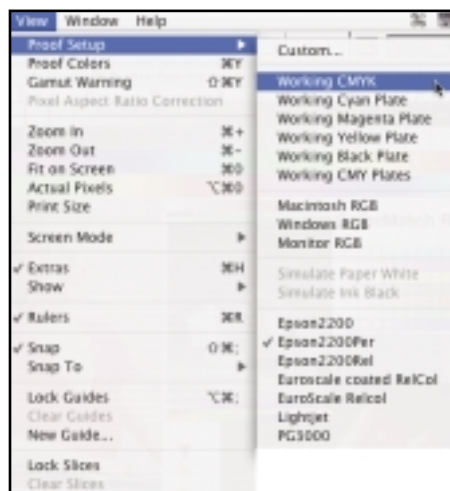


Figure 1: Proof Setup hierarchical submenus.

and we need to tell Photoshop how to use the profiles to produce this soft proof.

In Photoshop, soft proofing is accomplished through using the View>Proof Setup menus (Figure 1). Proof Setup has a number of hierarchical submenus. The first option is Custom, which will allow us to configure the Proof Setup dialog as we wish. (We'll get to that later.) Below the Custom menu are a number of submenus, beginning with Working CMYK. If that menu item is

selected, a soft proof of the selected CMYK output profile loaded in the Color Settings will be used to alter the image preview.

For example, if you select Working CMYK and the current Color Settings are the U.S. Prepress defaults, then U.S. Web Coated (SWOP) v2 would be the CMYK profile used to alter the preview and produce a soft proof. Try this on any image and you'll usually see a significant change in the color appearance, especially in saturated colors, because the current file preview is based on this CMYK output profile. The original file is still in the current RGB working space; only the preview is based on the CMYK profile.

Below Working CMYK are several menu options that allow you to see a soft proof of the individual color channels in the CMYK file. The Working Cyan Plate option would show the on-screen soft proof of only that cyan channel.

Next, Macintosh RGB, Windows RGB and Monitor RGB are all different ways to examine a file without using Photoshop's Display Using Monitor Compensation feature. That is, you can see what an image would look like in an application that doesn't

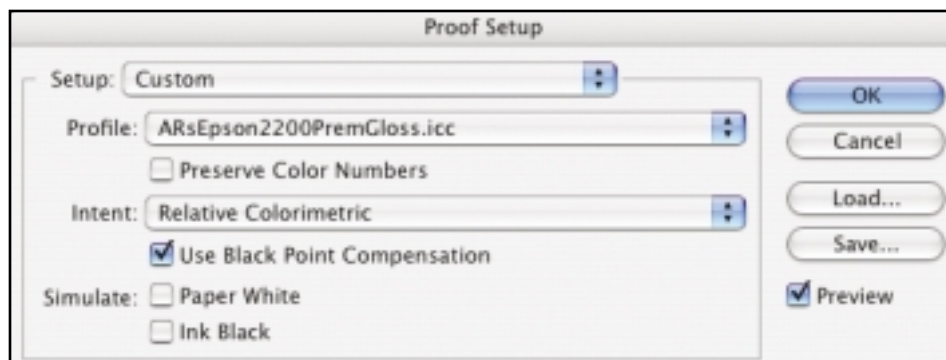


Figure 2: In the Custom Proof setup, you can configure options for soft proofs. Above, I've selected an output profile for my Epson Stylus Photo 2200. Next month we'll look at the role of these options in detail.

know how to recognize an embedded profile, in addition to using the display profile for previews. Opening a file in Adobe RGB 1998 in other than an ICC-aware application produces an inaccurate preview, in which the colors appear unsaturated. The colors will preview correctly in Photoshop, because it bases the image preview on the information about your display profile *and* the profile embedded in the image file.

Macintosh RGB shows you how a file will look on a Macintosh with a 1.8 display gamma; Windows RGB does the same, but with a 2.2 display gamma. These two options might be useful if you wish to see how an image would appear on different platforms when it's not opened in an ICC-aware application like Photoshop. The Monitor RGB option does the same function, using the specific user's ICC display profile to produce the previews, but without regard to the image file's embedded profile. This shows how an image would appear on your system when it's not opened in an ICC-aware application. These options are visible only with RGB files.

Soft proof has the greatest functionality in the Custom submenu, where there are a number of options for creating and saving custom Proof Setups using any ICC profile available (Figure 2). You can configure your settings, click the Save button, and then reuse them quickly. Settings are saved as .psf files, which can even be shared among other users (that's what the Load button is for)*. Naturally, the ICC profiles selected in the Proof Setup will also be available to other users, along with this .psf file. A user can then toggle on and off any soft proof configuration and see how the parameters and the profile affect the on-screen preview, based on the output profile. This produces a much more accurate screen preview of how the image will output, and greatly aids in further image editing, if necessary, based on the specific output device to be used.

Next month we'll look at each option in the Custom Proof setup, and discuss how to use soft proofing effectively. □

***Where are the .psf files?**

Save .psf files for Loading in the proper folder for your system. Under Mac OS X in the main Home library (Library>Application Support>Adobe>Color>Proofing). Under OS9 (System folder>Application support>Adobe>Color>Proofing). Under Windows (Program files>Common Files>Adobe>Color>Proofing folder).